Transportation and Land Use:

Recommendations from the Climate Action Plan Advisory Group

William Schroeer

Vice President, ICF International

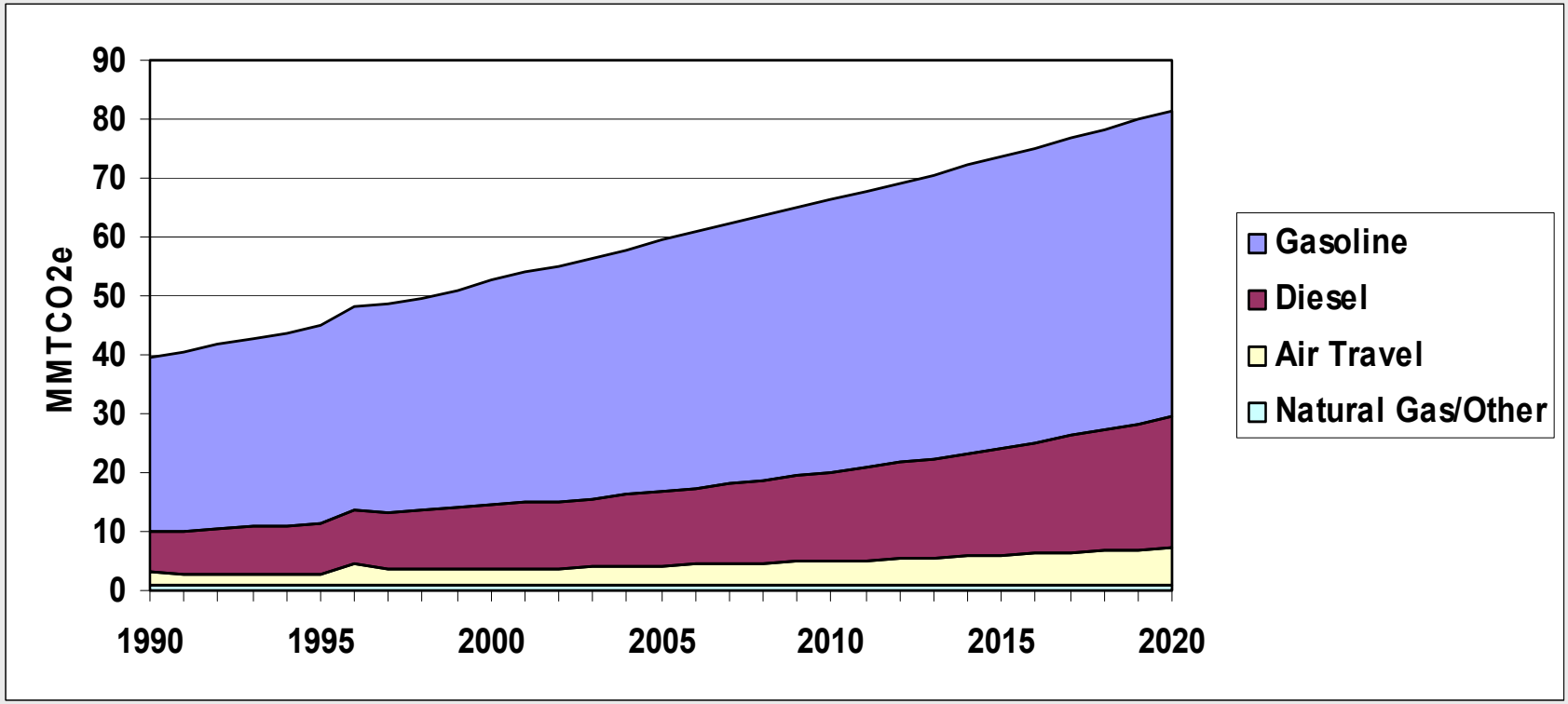
North Carolina needs a three-legged approach to controlling transportation GHG emissions

- The transportation sector produces 29% of NC's GHGs.
- Transportation emissions =

  Technologies x fuels x activity rates (how much people drive, fly, etc.)
- TLU emissions are expected to more than double from 1990 to 2020. Vehicle miles traveled (VMT) are forecast to grow faster than the population.
- The high growth in transportation emissions means that to meet its overall GHG goals, North Carolina must work on all three legs: *technologies*, *fuels*, and *the need to drive*.

Forecast: rapid growth in emissions

Historical and projected GHG emissions from the Transportation and Land Use Sector, 1990 to 2020



Key Recommendations

The CAPAG recommends three actions to reduce emissions from transportation:

1. North Carolina can and should cost-effectively **improve technology** to reduce GHG emissions per mile—particularly by adopting the California Clean Car standard.
2. North Carolina can and should **lower the GHG content of its fuel**.
3. North Carolina can and should **manage VMT.**
   - increase travel options and plan for growth that reduces emissions.
   - Absorb NC's rapid growth in development patterns that will produce far less travel, and far lower emissions than forecast.

Transportation Mitigation Recommendations and Impacts

- 13 actions across the three categories
- Reduce CO2 emissions by 232.3 million metric tons, 2008-2020
- Save 4.3 billion dollars
- Save $19 for each ton of CO2 reduced

What can NC DOT do?

1. Support integrated Transportation and Land Development Planning

   Reduce projected increase in VMT
   by 10% statewide by 2020.

2. Support Multi-Modal Transportation and Promotion

   Implement the North Carolina State Transportation Plan:
   invest 13% of state transportation funding in “Multi-Modal Transportation and Promotion”

Support integrated Transportation and Land Development Planning

- The primary need appears to be on the land development side
- How to help? Technical assistance
-

Support Multi-Modal Transportation and Promotion

NCDOT budget:	$ 2.5 billion/year
13% =	$325 million/year

- How to maximize returns?
- Invest in the demand side

  Example:
  - *Unlimited access transit* at the University of California-Los Angeles costs $810,000/year and has total benefits of $3,250,000/year
  - Return On Investment: 4x.
  - The many educational institutions in North Carolina could see similar savings.

Invest in the demand side, *cont'd*

- "Given the high cost of constructing parking spaces in the Silicon Valley, each $1 per year spent to buy Eco Passes can save between $23 and $333 on the capital cost of required parking spaces."

- Per public dollar, a transportation management organization (TMO) can accommodate seven times as many commuters as new highway investment.

Invest to produce returns in each time frame

- *Immediate* return: use of existing rideshare and Transit
- *Medium* return: new transit
- *Long-term*: integrated transportation and land use planning